# Level control

## ➜ ENR

- **Adjusting two levels (min./max.)**
- **Monitoring filling (UP) or emptying (DOWN) , selected by a switch on the front panel.**
- **Probes supplied with AC current.**
- **Sensitivity adjustable on front panel from 5 kΩ to 100 kΩ.**

## Specifications

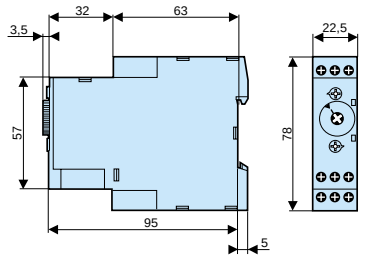
| Type | Characteristics | Voltages | Code |
|---|---|---|---|
| ENR | Monitoring filling UP<br>Monitoring emptying DOWN | 24 V AC | 84 870 201 |
| | | 48 V AC | 84 870 202 |
| | | 120 V AC | 84 870 203 |
| | | 230 V AC | 84 870 204 |

## General characteristics

| | |
|---|---|
| Operating range | 0.85 ➞ 1.10 x Un |
| Maximum power consumption | 3 VA |
| Adjustable sensitivity | 5 kΩ ➞ 100 kΩ |
| Measurement accuracy (at maximum sensitivity) | ± 30 % |
| Electrode voltage (max) | 24 V AC (50/60 Hz) |
| Electrode current (maximum) | 1 mA (50/60 Hz) |
| Maximum cable capacity | 10 nF |
| Response time high level | 300 ms |
| Response time low level | 500 ms |
| Output relay (according to AC1 resistive load) | 1 AgNi changeover relay 8 A AC max. |
| Galvanic isolation via transformer (4 kV, 8 mm creepage distance) | Class II VDE 0551 |
| Isolation of contacts and electrodes from power supply | 2.5 kV AC |
| Operating temperature range (°C) | -20 ➞ +50°C |
| Storage temperature range (°C) | -40 ➞ +70°C |
| Weight (g) | 150 |

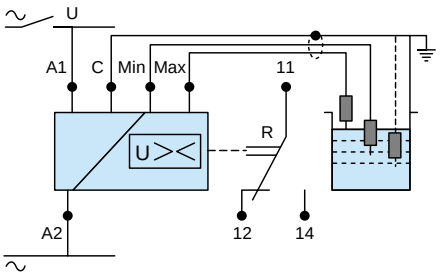
## Dimensions

**ENR**



## Connections

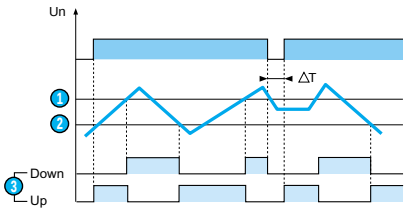
**ENR**




A1-A2 : power supply

## Principles

**Monitoring filling or emptying ENR**




1. Maximum level
2. Minimum level
3. Output relay : Down or Up

**Operating principle**
Monitoring maximum and/or minimum levels of conductive liquids (tap water, sea water, waste water, chemical solutions, coffee, etc).
The principle is based on measuring the apparent resistance of the liquid between two submerged probes. When this value is lower than the preset threshold displayed on the unit's front panel, the output relay changes state. To prevent any occurrences of electrolysis, an AC current is passed through the probes. Areas of application include the agri-food, chemical and other industries.

**Adjusting two levels : Minimum/Maximum**
The output relay changes state when the level of liquid reaches the maximum electrode, with the minimum electrode submerged. It returns to its initial state when the minimum probe is no longer in contact with the liquid.

**Note**
If the power break T lasts for 1 second or more, the relay reenergises instantly when in "UP" mode and is de-energised when in "DOWN" mode.

## Other informations

The probe cable (maximum length 100 metres) does not have to be screened, but avoid mounting it in parallel with the power supply cables. A screened cable can be used with the screening connected to the common terminal.